

WHAT IS CLAIMED IS:

1           1.       A method for providing services via a packet-switched (PS) multimedia  
2 network to users communicating in a circuit-switched (CS) domain, comprising:  
3                   establishing a dialog between a plurality of terminals through the PS  
4 multimedia network;  
5                   providing at least one service to at least one of the terminals via the dialog;  
6                   communicating CS bearer information between the plurality of terminals  
7 via the dialog, wherein the CS bearer information includes at least an indication that a  
8 communication flow is requested via a CS network; and  
9                   effecting the communication flow between the plurality of terminals via the  
10 CS network as directed by the CS bearer information.

1           2.       The method of Claim 1, wherein establishing the dialog between the  
2 plurality of terminals through the PS multimedia network comprises establishing the dialog  
3 between the plurality of terminals utilizing Session Initiation Protocol (SIP) via a SIP  
4 infrastructure.

1           3.       The method of Claim 1, wherein the PS multimedia network comprises an  
2 Internet Protocol Multimedia Subsystem (IMS), and wherein establishing a dialog between  
3 a plurality of terminals comprises establishing a dialog using a Session Initiation Protocol  
4 (SIP) through the IMS.

1           4.       The method of Claim 3, wherein establishing a dialog using SIP comprises  
2 sending a SIP INVITE message from a first of the plurality of terminals to at least a second  
3 of the plurality of terminals, and wherein communicating CS bearer information comprises  
4 communicating the CS bearer information by way of a session description provided via a  
5 message body of the SIP INVITE message.

1           5.       The method of Claim 3, wherein communicating CS bearer information  
2 comprises communicating the CS bearer information by way of a session description  
3 definition provided via the SIP dialog.

1           6.       The method of Claim 5, wherein communicating the CS bearer information  
2 by way of a session description definition comprises communicating the CS bearer  
3 information by way of a Session Description Protocol (SDP).

1           7.       The method of Claim 6, wherein communicating the CS bearer information  
2 by way of an SDP comprises communicating at least some of the CS bearer information  
3 via a media type particular to communication flows via the CS network.

1           8.       The method of Claim 7, wherein communicating the CS bearer information  
2 by way of an SDP further comprises communicating at least some of the CS bearer  
3 information via an SDP connection data field identifying the CS network.

1           9.       The method of Claim 6, wherein communicating the CS bearer information  
2 by way of an SDP comprises communicating at least some of the CS bearer information  
3 via a sub-field of a media type, wherein the sub-field is particular to communication flows  
4 via the CS network.

1           10.      The method of Claim 9, wherein communicating the CS bearer information  
2 by way of an SDP further comprises communicating at least some of the CS bearer  
3 information via an SDP connection data field identifying the CS network.

1           11.      The method of Claim 9, wherein communicating the CS bearer information  
2 by way of an SDP further comprises communicating at least some of the CS bearer  
3 information via an SDP attribute indicative of a type of the communication flow to be  
4 effected via the CS network.

1           12.      The method of Claim 6, wherein communicating the CS bearer information  
2 by way of an SDP comprises communicating at least some of the CS bearer information  
3 via a sub-field of an application media type, wherein the sub-field is particular to the  
4 communication flows via the CS network.

1           13.     The method of Claim 12, wherein communicating the CS bearer  
2 information by way of an SDP further comprises communicating at least some of the CS  
3 bearer information via an SDP connection data field identifying the CS network.

1           14.     The method of Claim 12, wherein communicating the CS bearer  
2 information by way of an SDP further comprises communicating at least some of the CS  
3 bearer information via an SDP attribute indicative of a type of the communication flow to  
4 be effected via the CS network.

1           15.     The method of Claim 6, wherein communicating the CS bearer information  
2 by way of an SDP comprises communicating at least some of the CS bearer information  
3 via a session-level attribute indicating that the communication flow is to be effected via the  
4 CS network.

1           16.     The method of Claim 3, wherein communicating CS bearer information  
2 comprises communicating the CS bearer information by way of a CS-specific content type  
3 value associated with a SIP Content-Type header.

1           17.     The method of Claim 3, wherein communicating CS bearer information  
2 comprises communicating the CS bearer information by way of a CS-specific value  
3 associated with a CS-specific SIP header.

1           18.     The method of Claim 1, wherein communicating CS bearer information  
2 comprises communicating the CS bearer information by way of a session description  
3 definition provided via the dialog.

1           19.     The method of Claim 1, wherein communicating CS bearer information  
2 comprises communicating the CS bearer information by way of a CS-specific content type  
3 value associated with a header of a signaling protocol operable in the PS multimedia  
4 network.

1           20.     The method of Claim 1, wherein communicating CS bearer information  
2 comprises communicating the CS bearer information by way of a CS-specific value  
3 associated with a CS-specific header of a signaling protocol operable in the PS multimedia  
4 network.

1           21.     The method of Claim 1, wherein providing at least one service comprises  
2 providing at least one of a multimedia Caller Line Identification service, video service,  
3 audio service, video telephony service, multimedia conference service, voicemail, call  
4 forwarding, call transfer, and application sharing service.

1           22.     The method of Claim 1, wherein effecting the communication flow between  
2 the plurality of terminals via the CS network comprises communicating real-time media  
3 through the CS network.

1           23.     The method of Claim 1, wherein effecting the communication flow between  
2 the plurality of terminals via the CS network comprises communicating a conversational  
3 quality of service class flow through the CS network.

1           24.     The method of Claim 1, wherein effecting the communication flow between  
2 the plurality of terminals via the CS network comprises communicating a streaming quality  
3 of service class flow through the CS network.

1           25.     The method of Claim 1, wherein effecting the communication flow between  
2 the plurality of terminals via the CS network comprises communicating at least one of a  
3 voice call, video transmission, audio transmission, and facsimile transmission through the  
4 CS network.

1           26.     A method for establishing a circuit-switched (CS) connection between at  
2 least two terminals, comprising:  
3                 establishing a dialog between the at least two terminals through a packet-  
4 switched (PS) multimedia network;

5                   communicating CS bearer information between the at least two terminals  
6 via the dialog, wherein the CS bearer information includes at least an indication that a  
7 communication flow is requested via a CS network;  
8                   establishing a connection via the CS network based at least in part on the  
9 CS bearer information provided via the dialog; and  
10                  effecting the communication flow between the at least two terminals using  
11 the connection established via the CS network.

1           27.     The method of Claim 26, wherein the PS multimedia network comprises an  
2 Internet Protocol Multimedia Subsystem (IMS), and wherein establishing a dialog between  
3 a plurality of terminals comprises establishing a dialog using a Session Initiation Protocol  
4 (SIP) through the IMS.

1           28.     The method of Claim 26, wherein establishing the dialog between the at  
2 least two terminals through the PS multimedia network comprises establishing the dialog  
3 between the plurality of terminals utilizing Session Initiation Protocol (SIP) via a SIP  
4 infrastructure.

1           29.     A terminal for receiving services via a packet-switched (PS) multimedia  
2 network and communicating via a circuit-switched (CS) network, comprising:  
3                   a processing system;  
4                   a first user agent operable via the processing system and configured to  
5 establish a dialog with at least one targeted recipient terminal through the PS multimedia  
6 network, and to communicate CS bearer information to the at least one targeted recipient  
7 terminal via the dialog, wherein the CS bearer information includes at least an indication  
8 that a communication flow is requested via a CS network; and  
9                   a second user agent operable via the processing system and configured to  
10 effect the communication flow between the terminal and the at least one targeted recipient  
11 terminal via the CS network as directed by the CS bearer information.

1           30.     The terminal as in Claim 29, wherein the PS multimedia network comprises  
2     an Internet Protocol Multimedia Subsystem (IMS), and wherein the first user agent is  
3     further configured to utilize at least one service provided via the IMS.

1           31.     The terminal as in Claim 29, wherein the first user agent comprises a  
2     Session Initiation Protocol (SIP) user agent, and wherein the dialog is effected using SIP.

1           32.     The terminal as in Claim 31, further comprising a session description user  
2     agent operatively coupled to the SIP user agent, wherein the session description user agent  
3     is configured to provide the CS bearer information to be communicated by the SIP user  
4     agent.

1           33.     The terminal as in Claim 32, wherein the session description user agent  
2     comprises a Session Description Protocol (SDP) user agent configured to provide the CS  
3     bearer information via a media type particular to communication flow via the CS network.

1           34.     The terminal as in Claim 32, wherein the session description user agent  
2     comprises a Session Description Protocol (SDP) user agent configured to provide the CS  
3     bearer information via a sub-field of a media type, wherein the sub-field is particular to  
4     communication flow via the CS network.

1           35.     The terminal as in Claim 32, wherein the session description user agent  
2     comprises a Session Description Protocol (SDP) user agent configured to provide the CS  
3     bearer information via a sub-field of an application media type, wherein the sub-field is  
4     particular to the communication flow via the CS network.

1           36.     The terminal as in Claim 32, wherein the session description user agent  
2     comprises a Session Description Protocol (SDP) user agent configured to provide the CS  
3     bearer information via a session-level attribute indicating that the communication flow is  
4     to be effected via the CS network.

1           37.     The terminal as in Claim 31, wherein the SIP user agent is configured to  
2 provide the CS bearer information via a CS-specific content type value associated with a  
3 SIP Content-Type header.

1           38.     The terminal as in Claim 31, wherein the SIP user agent is configured to  
2 provide the CS bearer information via a CS-specific value associated with a CS-specific  
3 SIP header.

1           39.     The terminal as in Claim 29, wherein the terminal comprises a mobile  
2 station wirelessly coupled to the PS multimedia network and CS network via a Radio  
3 Access Network (RAN).

1           40.     A system for providing Internet Protocol Multimedia Subsystem (IMS)-  
2 based services to users communicating time delay-sensitive information over a circuit  
3 switched (CS) network, comprising:  
4                   a receiver terminal;  
5                   a sender terminal comprising:  
6                         a sender terminal processing system;  
7                         a sender terminal Session Initiation Protocol (SIP) user agent  
8 operable via the sender terminal processing system and configured to initiate a  
9 dialog with the receiver terminal through the IMS, and to communicate CS bearer  
10 information to the receiver terminal via the dialog, wherein the CS bearer  
11 information includes at least an indication that a communication flow with the  
12 receiver terminal is requested via a CS network; and  
13                   a sender terminal CS communication user agent operable via the  
14 sender terminal processing system and configured to effect the communication  
15 flow with the receiver terminal via the CS network as directed by the CS bearer  
16 information;  
17                   wherein the receiver terminal comprises:  
18                         a receiver terminal processing system;

19 a receiver terminal SIP user agent operable via the recipient terminal  
20 processing system and configured to recognize the CS bearer information, and to  
21 respond to the sender terminal acknowledging receipt of the CS bearer information;  
22 and

23 a receiver terminal CS communication user agent operable via the  
24 receiver terminal processing system and configured to effect the communication  
25 flow with the sender terminal via the CS network as directed by the CS bearer  
26 information.

1 41. A computer-readable medium having instructions stored thereon which are  
2 executable by a computer system for establishing a circuit-switched (CS) connection  
3 between at least two terminals by performing steps comprising:

4 establishing a dialog between the at least two terminals through a packet-  
5 switched (PS) multimedia network;

6 communicating CS bearer information between the at least two terminals  
7 via the dialog, wherein the CS bearer information includes at least an indication that a  
8 communication flow is requested via a CS network;

9 establishing a connection via the CS network based at least in part on the  
10 CS bearer information provided via the dialog; and

11 effecting the communication flow between the at least two terminals using  
12 the connection established via the CS network.

1 42. The computer-readable medium as in Claim 41, wherein the PS multimedia  
2 network comprises an Internet Protocol Multimedia Subsystem (IMS), and wherein the  
3 instructions for performing the step of establishing a dialog between a plurality of  
4 terminals comprise instructions for establishing a dialog using a Session Initiation Protocol  
5 (SIP) through the IMS.

1 43. The computer-readable medium as in Claim 42, wherein the instructions for  
2 performing the step of communicating CS bearer information comprise instructions for



3 communicating the CS bearer information by way of a CS-specific content type value  
4 associated with a SIP Content-Type header.

1 44. The computer-readable medium as in Claim 42, wherein the instructions for  
2 performing the step of communicating CS bearer information comprise instructions for  
3 communicating the CS bearer information by way of a CS-specific value associated with a  
4 CS-specific SIP header.

1 45. The computer-readable medium as in Claim 42, wherein the instructions for  
2 performing the step of communicating CS bearer information comprise instructions for  
3 communicating the CS bearer information by way of a session description definition  
4 provided via the SIP dialog.

1 46. The computer-readable medium as in Claim 45, wherein the session  
2 description definition comprises a Session Description Protocol (SDP), and wherein the  
3 instructions for communicating the CS bearer information by way of the SDP comprise  
4 instructions for communicating at least some of the CS bearer information via a media type  
5 particular to communication flows via the CS network.

1 47. The computer-readable medium as in Claim 45, wherein the session  
2 description definition comprises a Session Description Protocol (SDP), and wherein the  
3 instructions for communicating the CS bearer information by way of the SDP comprise  
4 instructions for communicating at least some of the CS bearer information via a sub-field  
5 of a media type, wherein the sub-field is particular to communication flows via the CS  
6 network.

1 48. The computer-readable medium as in Claim 45, wherein the session  
2 description definition comprises a Session Description Protocol (SDP), and wherein the  
3 instructions for communicating the CS bearer information by way of the SDP comprise  
4 instructions for communicating at least some of the CS bearer information via a sub-field

5 of an application media type, wherein the sub-field is particular to the communication  
6 flows via the CS network.

1           49.     The computer-readable medium as in Claim 45, wherein the session  
2 description definition comprises a Session Description Protocol (SDP), and wherein the  
3 instructions for communicating the CS bearer information by way of the SDP comprise  
4 instructions for communicating at least some of the CS bearer information via a session-  
5 level attribute indicating that the communication flow is to be effected via the CS network.